

## CLAIMS

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a27 1. A method of providing to a user digital programming at a receiver station, comprising the steps of:

storing a plurality of digitally compressed video signals on a digital versatile disk, each signal corresponding to a different video option of a program, wherein the plurality of video signals comprise at least one standard video signal;

receiving the plurality of digitally compressed video signals;

selecting one of the video options;

digitally decompressing the selected video signal corresponding to the selected video option; and

displaying the selected video signal corresponding to the selected video option, wherein visual transition to the selected video signal is seamless.

2. The method of claim 1, wherein the digital versatile disk is located at a central location.

3. The method of claim 1, wherein the digital versatile disk is located at the receiver station.

4. The method of claim 1, wherein the receiver station is a digital television.

5. The method of claim 1, wherein the receiver station comprises a personal computer with a television card.

6. The method of claim 1, wherein the receiver station comprises a digital cable box and a television, operably connected to the digital cable box.

7. The method of claim 1, further comprising the steps of:

indicating to the user the different video options;

receiving from the user a command indicating the selected video option.

8. The method of claim 1, wherein the plurality of video signals further comprise at least one closeup video and at least one slow motion video replay.

9. The method of claim 1, wherein the plurality of video signals comprise at least one replay video.

10. The method of claim 1, further comprising the steps of:

creating a viewer profile;

wherein the selecting step comprises the substep of selecting the video option based at least in part on the viewer profile.

11. The method of claim 1, further comprising the steps of:

obtaining a plurality of graphics segments;

selecting at least one graphic segment;

displaying the selected graphic segments.

12. The method of claim 11, wherein at least one of the graphics segments is stored in the digital versatile disk.

13. The method of claim 1, further comprising the step of receiving a plurality of audio signals.

14. The method of claim 13, wherein each audio signal is associated with one of the video signals.

15. The method of claim 13, wherein at least one of the audio signals is stored in the digital versatile disk.

16. A system of providing to a user digital programming at a receiver station, comprising:  
a digital versatile disk, wherein the digital versatile disk stores a plurality of digitally  
compressed video signals;

a means, operably connected to the digital versatile disk, for receiving a plurality of  
digitally compressed video signals, each signal corresponding to a different video option of a  
program, wherein the plurality of video signals comprises at least one standard video signal;

a processor, connected to the receiving means, wherein the processor selects one of the  
video options;

a digital decompressor, operably connected to the processor, for decompressing the  
selected video signal corresponding to the selected video option; and

a display screen, operably connected to the digital decompressor, for displaying the  
selected video signal corresponding to the selected video option, wherein visual transition to the  
selected video signal is seamless.

17. The system of claim 16, wherein the digital versatile disk is located at a central location.

18. The system of claim 16, wherein the digital versatile disk is located at the receiver station.

19. The system of claim 16, wherein the receiver station is a digital television.

20. The system of claim 16, wherein the receiver station comprises a personal computer with  
a television card.

21. The system of claim 16, wherein the receiver station comprises a digital cable box and a  
television, operably connected to the digital cable box.

22. The system of claim 16, further comprising a means for receiving at least one graphics  
segment.

23. The system of claim 22, wherein the graphics segment is displayed to the user on the display screen.

24. The system of claim 16, wherein the plurality of video signals further comprise at least one closeup video and at least one slow motion video replay.

25. The system of claim 16, wherein the plurality of video signals further comprise at least one replay video.

26. The system of claim 16, further comprising a storage device, wherein a viewer profile is stored in the storage device and the processor selects the video option based at least in part on the viewer profile.

27. The system of claim 16, further comprising a means of receiving a plurality of audio signals.

28. The system of claim 27, wherein each audio signal is associated with one of the video signals.

29. The system of claim 27, wherein the plurality of audio signals are stored in the digital versatile disk.

30. A method for preparing a plurality of digital signals at a central location for seamless switching at subscriber reception sites, comprising the steps of:

receiving a plurality of video signals at the central location;

genlocking the plurality of video signals, wherein genlocking creates time synchronized

5 video signals;

directing the plurality of video signals into one or more video encoders;

inserting splice points into the plurality of video signals;

time synchronizing the plurality of video encoders, thereby ensuring that the splice points inserted in the video occur at a correct frame number;

10       digitally compressing the plurality of digital video signals in the video encoders, forming a digital program stream, wherein the digital video signals are encoded at a lower bit rate than channel capacity resulting in creation of certain time gaps in each of the video signals;

15       wherein program switching from one video signal to another video signal at the subscriber reception sites is made seamless through the creation of the time gaps, the time gaps representing switch times thereby allowing time for a seamless switch from one of the video signals to another video signal;

20       storing the digital program stream on at least one digital versatile disk..

31.     The method of claim 29 wherein a plurality of audio signals are associated with the plurality of video signals and further comprising the steps of receiving the plurality of audio signals, encoding the plurality of received audio signals and compressing the plurality of audio signals.

32.     The method of claim 29 wherein the encoder receives a plurality of data computer codes and further comprising the step of encoding the received plurality of data computer codes with the plurality of video signals.

33.     A digital encoding system for preparing a plurality of digital signals at a central location for seamless switching at subscriber reception sites, comprising:

25       at least one video genlock device, for receiving the plurality of video signals and creating time synchronized video signals;

at least one video encoder, connected to the video genlock device, for inserting splice points into the plurality of video signals, and encoding and compressing the plurality of video signals to form a digital program stream, wherein the video encoders are time synchronized;

wherein the digital video signals are encoded at a lower bit rate than channel capacity resulting in creation of certain time gaps in each of the video signals, the time gaps representing switch times thereby allowing time for a seamless switch from one of the video signals to another video signal; and

at least one digital versatile disk storage means, operably connected to the video encoder, for storing the digital program stream..

34. The digital encoding system of claim 33 further comprising a transmitter means, operably connected to the digital versatile disk storage means, for transmitting the plurality of digital program streams onto a subscriber distribution network selected from the group consisting of cable television, broadcast television, and direct broadcast satellite.

35. The digital encoding system of claim 33 wherein a plurality of audio signals are associated with the plurality of video signals and the encoder receives the plurality of audio signals and encodes and decompresses the plurality of audio signals.

36. The digital encoding system of claim 33 wherein the encoder receives a plurality of data computer codes and encodes the data computer codes with the plurality of video signals.

37. The digital encoding system of claim 33 wherein at least one of the video signals comprises a regular television program signal.

38. The digital encoding system of claim 33 wherein the at least two of the video signals comprises interactive program signals of an interactive program.

